

REMARKS

This Application has been carefully reviewed in light of the Office Actions mailed October 2, 2006 and April 3, 2007. At the time of the Office Action, Claims 1, 3, 6, and 8-10 were pending in this Application. Claims 1, 3, 6, and 8-10 stand rejected. Claims 2, 4, 5, and 7 were previously cancelled without prejudice of disclaimer. Claim 1 has been amended to further define various features of Applicants' invention. Applicants respectfully request reconsideration and favorable action in this case.

Objections under 35 U.S.C. § 132

The Examiner objects to amendments made to the specification in Applicants' Response dated June 23, 2006. Specifically, the Examiner alleges that the specification introduces new matter into the disclosure, asserting the phrase "... may have essentially the same included angle" is not supported by the original disclosure.

Applicants have further amended Paragraph [0024] as shown above. The portion of Paragraph [0024] not found in the original specification now reads:

As depicted in FIG. 4, nozzle needle tip 10 may be provided directly adjacent the frusto-conical body section 24 of the nozzle needle, and the included angle of each of the nozzle needle tip 10 and frusto-conical body section 24 may have essentially the same included angle.

Applicants submit that the language of this amended is entirely supported by the original disclosure. To illustrate, it is a basic tenet of United States patent law that "In establishing a disclosure, applicant may rely not only on the specification and drawing as filed, but also on the original claims if their content justifies it." M.P.E.P. § 608.04; *see also* M.P.E.P. § 608.01(I). In the original disclosure filed by Applicants, the following language appeared in the originally filed claims:

- "Fuel injection valve according to claim 4, wherein *the outer surfaces of the conical nozzle needle tip and of the frusto-conical body section of the nozzle needle each have essentially the same included angle.*" (Original Claim 5) (emphasis added).

- “Fuel injection valve according to claim 9, wherein *the outer surfaces of the conical nozzle needle tip and of the frusto-conical body section of the nozzle needle each have essentially the same included angle*” (Original Claim 10) (emphasis added).

Thus, in the original disclosure, Applicants claimed two embodiments of their invention in which “the outer surfaces of the conical nozzle needle tip and of the frusto-conical body section of the nozzle needle each have essentially the same included angle.” Thus, it logically follows that Applicants’ invention is one in which “the included angle of each of the nozzle needle tip 10 and frusto-conical body section 24 may have essentially the same included angle,” as recited in the specification amendment set forth above. Accordingly, the specification amendment adds no new matter, and the Applicants respectfully request withdrawal of the objections under 35 U.S.C. § 132 and entry of the specification amendment.

Rejections under 35 U.S.C. § 112

Claims 1, 6 and 10 were rejected by the Examiner under 35 U.S.C. § 112, second paragraph, as being indefinite and failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Each ground of objection made by the Examiner under 35 U.S.C. § 112, second paragraph is addressed independently below.

First, the Examiner alleges that Claim 1 recites the “same included angle” in line 9, and that there is insufficient antecedent basis for this limitation. Applicants have amended claim 1 to overcome this ground of rejection, and respectfully requests withdrawal of this rejection of full allowance of Claim 1 as amended.

Second, the Examiner alleges for the first time that the limitation “... essentially the same ...” recited in Claims 1 and 10 is indefinite because the specification lacks any explicit interpretation as to what constitutes “essentially the same” and does not provide explicit commentary as to how many degrees two angles must be within to constitute being “essentially the same.” Similarly, the Examiner alleges for the first time that the limitation “... essentially parallel ...” as recited in Claims 1 and 6 is indefinite because the specification lacks any explicit interpretation as to what constitutes “essentially parallel” and does not

provide explicit commentary as to how many degrees two lines must be within each other to constitute being “essentially parallel.”

Applicants respectfully submit that Examiner’s rejections regarding the use of the word “essentially” in Claims 1, 6 and 10 is improper in light of well-settled case law permitting patent applicants wide latitude in using relative and functional claim terms and broadening usages such as “about,” “approximately,” “substantially,” “generally,” and “essentially.” For example, the Federal Circuit (the decisions of which are binding upon the Office) has held that a claim reciting that a product be “essentially free of crystalline material” was not indefinite under 35 U.S.C. § 112, second paragraph, despite the fact that the applicant’s written description did not provide any interpretation of the term “essentially free.” *Glaxo Group Ltd. v. Ranbaxy Pharamaceuticals*, 262 F.3d 1333, 59 U.S.P.Q.2d 1950 (Fed. Cir. 2001). The Federal Circuit has also held that a claim reciting that two surfaces are “generally parallel” was also held to be valid despite lack of interpretation in the written description, the Court further noting that, “While the term ‘generally parallel’ ... is mathematically imprecise, we note that words of approximation, such as ‘generally’ and ‘substantially’ are descriptive terms commonly used in patent claims to avoid a strict numerical boundary to the specified parameter.” *Anchor Wall Systems, Inc. v. Rockwood Retaining Walls, Inc.*, 340 F.3d 1298, 67 U.S.P.Q.2d 1865 (Fed. Cir. 2003) (internal citations omitted); *see also Ecolab, Inc. v. Envirochem, Inc.*, 264 F.3d 1358, 1367 (Fed. Cir. 2001); *Pall Corp. v. Micron Separations, Inc.*, 66 F.3d 1211, 1217 (Fed. Cir. 1995); *Andrew Corp. v. Gabriel Elecs., Inc.*, 847 F.2d 819, 821-22 (Fed. Cir. 1988).

Accordingly, under well-settled Federal Circuit jurisprudence, Applicants’ use of the phrases “essentially the same” and “essentially parallel” do not render Claims 1, 6 and 10 indefinite under 35 U.S.C. § 112, second paragraph. Thus, for at least the reasons set forth above, Applicants respectfully request withdrawal of the rejections under 35 U.S.C. § 112, second paragraph, and full allowance of Claims 1, 6 and 10.

In the Office Action, the Examiner states that Claim 3 is also rejected under 35 U.S.C. § 112, second paragraph for indefiniteness. (Office Action, Page 3). However, Applicants note that the Examiner does not explain or support any rejection of Claim 3 based on Section

112, and thus the Applicants have assumed that the Examiner's reference to Claim 3 with regard to Section 112 rejections was in error.

Rejections under 35 U.S.C. § 102

Claims 1, 3, 6, and 8 were rejected by the Examiner under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent 5,899,389 issued to Arpad M. Pataki et al. ("Pataki"). Claims 6, and 8-10 stand rejected by the Examiner under 35 U.S.C. §102(b) as being anticipated by U.S. Patent 4,470,548 issued to Shoji Ushimura ("Ushimura"). Claims 6 and 8-10 stand rejected by the Examiner under 35 U.S.C. §102(b) as being anticipated by U.S. Patent 4,982,901 issued to Volker Holzgrefe ("901-Holzgrefe"). Claims 6 and 8-10 stand rejected by the Examiner under 35 U.S.C. §102(b) as being anticipated by U.S. Patent 5,012,981 issued to Volker Holzgrefe et al. ("981-Holzgrefe"). Applicants respectfully traverse and submit the cited art does not teach all of the elements of the claimed embodiment of the invention.

A. The Form of the Examiner's Rejections under 35 U.S.C. § 102(b) are Improper Because the Examiner Failed to cite Pataki, Ushimura, 901-Holzgrefe and 981-Holzgrefe with Sufficient Specificity under 35 U.S.C. § 132 to Allow Applicants to Adequately Respond to the Rejections

In the Office Action dated April 3, 2007, the Examiner expresses confusion whether Applicants' arguments regarding the insufficiency of the October 2, 2006 Office Action were on the basis that a reference was omitted from PTO Form 892 or that Paragraphs 5-8 of the October 2, 2006 Office Action were inadequate. Applicants submit that it is unambiguously clear from the arguments below, and those set forth in Applicants' January 2, 2007 Response, that the Applicants have asserted and continue to assert that Paragraphs 5-8 are inadequate under 35 U.S.C. § 132 and 37 C.F.R. § 1.104.

To reiterate, according to 35 U.S.C. § 132, the PTO must notify Applicants of the reasons for rejecting *each* claim (including dependent claims) and provide such information and references as may be useful in judging the propriety of continuing the prosecution. Applicants yet again note that the form of the Examiner's rejections under 35 U.S.C. § 102(b) are improper because the Examiner failed to cite Pataki, Ushimura, 901-Holzgrefe and 981-

Holzgreffe properly and with sufficient specificity under 35 U.S.C. § 132 and 37 C.F.R. § 1.104 to allow Applicants to adequately respond to the rejections. The Examiner's explanation for rejection of Claims 1, 3, 6 and 8-10 is insufficient under these statutes and regulations.

In an attempt to overcome this argument of the Applicants, the Examiner merely states that:

[P]aragraphs 5-8 clearly identified the US Patents by inventor name and patent number. Additionally each paragraph in the Office Action clearly *identified major elements of applicant's claims* with a corresponding reference character from the US Patent being applied.

(April 3, 2007 Office Action, Page 2) (emphasis added).

Applicants note that it is not sufficient that an Office Action rejection only "identif[y] major elements of applicant's claims." Well-settled case law states that "[a] claim is anticipated only if *each and every element* as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987) (emphasis added). Thus, it is incumbent upon the Examiner to identify and describe how *each and every element* of Applicants' Claims, and not merely the "major elements" of such claims, are anticipated by the allegedly anticipatory prior art.

For instance, nowhere in the record does the Examiner allege that any of the cited references teach:

- a fuel injection valve that includes a nozzle needle with a nozzle needle seat that includes "a sealing edge provided between an outer surface of a conical nozzle needle tip and a frusto-conical body section of the nozzle needle... the outer surface of the conical nozzle needle tip provided directly adjacent the frusto-conical body section of the nozzle needle and each having essentially the same included angle" as recited in Claim 1 prior to amendment herein, or similar limitations recited in Claims 6 and 10;
- a fuel injection valve according to Claim 1 "wherein the gap adjoins the sealing edge of the nozzle needle seat," as recited in Claim 3;

- a fuel injection valve according to Claim 6, “wherein the gap adjoins a sealing edge of the nozzle needle seat,” as recited in Claim 8;
- a fuel injection valve according to Claim 6, “wherein the sealing edge is provided on a circumferential cylindrical needle section between a nozzle needle tip and a frusto-conical body section of the nozzle needle,” as recited in Claim 9; or
- a fuel injection valve according to Claim 9, “wherein the outer surfaces of a conical nozzle needle tip and of the frusto-conical body section of the nozzle needle each have an included angle, the included angle of the conical needle tip having an included angle essentially the same as the included angle of the frusto-conical body section of the nozzle needle,” as recited in Claim 10.

Accordingly, the Examiner further defeated the intent and purpose of 35 U.S.C. § 132, as well as frustrated the efficiency of the patent prosecution process by failing to properly identify the portions of Pataki, Ushimura, 901-Holzgreffe and 981-Holzgreffe that allegedly teach each of the limitations of Claims 1, 3, 6 and 8-10.

The Examiner asserts that “Applicant’s lengthy response and arguments are evidence that the references were cited with sufficient sufficiency to allow applicant to adequately respond.” This assertion is faulty for a number of reasons. First, the Examiner’s assertion is circular in nature. Regardless of whether the Examiner satisfied the statutory requirements of 35 U.S.C. § 132, Applicants have the obligation to file a fully responsive reply. *See, e.g.* M.P.E.P. §§ 714.02 - 714.04. Applicants therefore find it unreasonable that the Examiner would suggest that the only means by which the Applicants can question the insufficiency of the October 2, 2006 Office Action is to file a non-fully responsive reply and risk abandonment of the Application

Second, the Examiner’s assertion that “Applicant’s lengthy response and arguments are evidence that the references were cited with sufficient sufficiency to allow applicant to adequately respond,” is completely inconsistent with the nature of the January 2, 2007 Response filed by the Applicants, in that it is difficult to classify Applicants’ replies to Examiner’s 35 U.S.C. § 102(b) rejections as “lengthy.” In fact, because of the Examiner’s failure to comply with 35 U.S.C. § 132, Applicants were only able to argue the anticipation

rejections on the grounds that the Examiner failed to allege how the prior art discloses the elements of Applicants' independent claims. Furthermore, because the Examiner did not reject dependent Claims 3 and 8-10 with sufficient specificity, Applicants were only able to argue that these dependent Claims are allowable by virtue of being dependent upon an otherwise allowable base claim, and were foreclosed from presenting arguments regarding how Claims 3 and 8-10 are allowable separately from their dependence on independent Claims 1 and 6.

In the April 3, 2007 Office Action, the Examiner, apparently in a sarcastic manner, quips: "If applicant is incapable of reading his own claims, reading the explanations in the Office Action, reading the references, and making a determination of the interpretation of the references in the Office Action, applicant is encouraged to contact the examiner." (April 3, 2007 Office Action, Page 2). In retort, the Applicants assume that the Examiner has read Applicants' prior Response in full, and if the Applicants' assumption is correct, it would be evident to the Examiner that the explanations in the October 2, 2006 Office Action were insufficient. In addition, the Applicants assume that the Examiner has read the cited references. Accordingly, if the Applicants' assumption is correct, and the Examiner's assertion that the cited art anticipates *each and every element* of Applicants' Claims (which Applicants do not concede), Examiner should be able to identify the specific portions of the cited art that disclose:

- a fuel injection valve that includes a nozzle needle with a nozzle needle seat that includes "a sealing edge provided between an outer surface of a conical nozzle needle tip and a frusto-conical body section of the nozzle needle... the outer surface of the conical nozzle needle tip provided directly adjacent the frusto-conical body section of the nozzle needle and each having essentially the same included angle" as recited in Claim 1 prior to amendment herein, or similar limitations recited in Claims 6 and 10;
- a fuel injection valve according to Claim 1 "wherein the gap adjoins the sealing edge of the nozzle needle seat," as recited in Claim 3;
- a fuel injection valve according to Claim 6, "wherein the gap adjoins a sealing edge of the nozzle needle seat," as recited in Claim 8;

- a fuel injection valve according to Claim 6, “wherein the sealing edge is provided on a circumferential cylindrical needle section between a nozzle needle tip and a frusto-conical body section of the nozzle needle,” as recited in Claim 9; or
- a fuel injection valve according to Claim 9, “wherein the outer surfaces of a conical nozzle needle tip and of the frusto-conical body section of the nozzle needle each have an included angle, the included angle of the conical needle tip having an included angle essentially the same as the included angle of the frusto-conical body section of the nozzle needle,” as recited in Claim 10.

For at least the reasons set forth above, Applicants respectfully submit that the Examiner has failed to cite Pataki, Ushimura, 901-Holzgreffe and 981-Holzgreffe properly and with sufficient specificity to allow Applicants to adequately respond to the rejections under 35 U.S.C. § 102. Thus, the Examiner has clearly failed to comply with 35 U.S.C. § 132. If the Examiner maintains rejections of the pending claims based on Pataki, Ushimura, 901-Holzgreffe and 981-Holzgreffe, Applicants respectfully request that such rejections be sufficiently specific and included in a Non-Final Office Action, such that Applicants have an opportunity to adequately respond to *all* rejections (including rejections of dependent claims) based on Pataki, Ushimura, 901-Holzgreffe and 981-Holzgreffe.

B. Claims 1, 3, 6, and 8-10 are Not Anticipated by Pataki, Ushimura, 901-Holzgreffe and 981-Holzgreffe

Assuming, *arguendo*, that the Examiner has set forth adequate reasons for rejection as contemplated by 35 U.S.C. § 132 (which the Applicants do not concede), rejected Claims 1, 3, 6 and 8-10 are not anticipated under 35 U.S.C. § 102(b).

Claims 1 and 3

“A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987). Furthermore, “the identical invention must be shown in as complete detail as is

contained in the ... claim.” *Richardson v. Suzuki Motor Co. Ltd.*, 868 F.2d 1226, 1236, 9 U.S.P.Q.2d 1913, 1920 (Fed. Cir. 1989). Applicant respectfully submits that the cited art as anticipated by the Examiner cannot anticipate the rejected Claims, because: (a) the Examiner fails to state a prima facie case of anticipation, and (b) the cited art does not show all the elements of the present Claims.

Independent Claim 1 recites, among other elements, a fuel injection valve that includes a nozzle needle with a nozzle needle seat that includes “the outer surface of the conical nozzle needle tip provided directly adjacent the frusto-conical body section of the nozzle needle wherein the outer surfaces of a conical nozzle needle tip and of the frusto-conical body section of the nozzle needle each have an included angle, the included angle of the conical needle tip having an included angle essentially the same as the included angle of the frusto-conical body section of the nozzle needle.” In the most recent Office Action, the Examiner alleges that analogous language of Claim 1 prior to amendment is anticipated by Pataki, but completely fails to allege how Pataki either expressly or inherently discloses the limitation of Claim 1 quoted above. Likely, the Examiner fails to allege a prima facie case of anticipation because Pataki fails to disclose this limitation.

Accordingly, Pataki does not teach all of the elements of Claim 1 and, therefore, cannot anticipate Independent Claim 1 or Claim 3 that depends therefrom. Applicants request reconsideration, withdrawal of the rejection under 35 U.S.C. § 102(b) and full allowance of Claims 1 and 3.

Claims 6 and 8-10

Independent Claim 6 recites a fuel injection valve that includes a nozzle body including a nozzle body seat and a nozzle needle with a nozzle needle seat, with a gap formed between the nozzle needle and the nozzle body “such that the gap is operable to hydraulically dampen movement of the nozzle needle seat toward the nozzle body seat.” First, the Applicants note that no portion of the cited references discuss any gap as claimed by the Applicants, and the Examiner has yet to cite any portion of the references that does. Also, as alleged in the prior Response, assuming that the references disclose any such gap (which Applicants do not concede), the cited references do not disclose providing a gap designed for

dampening of the motion between the nozzle body and the nozzle needle. In the Office Action, the Examiner asserts “the recitation such that the gap is operable to hydraulically dampen movement of the nozzle needle seat toward the nozzle body seat’ merely requires the ability/capability to operate in such a manner. The device of [each of the cited references] has the capability to operate in such a manner because the gap of [each reference] traps/contains part of the fuel flow.” (Office Action, Page 4). The Examiner’s rejection, however, fails because each of the cited references fails to disclose the recited elements as inherent or necessarily present. To establish that a claim element is inherent in a prior art reference, *extrinsic* evidence “must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill.” *In re Robertson*, 169 F.3d 743, 745 (Fed. Cir. 1999). Inherency, however, may not be established by probabilities or possibilities. *Id.*

In response to this argument, the Examiner maintains, despite any shred of evidence in any document of record in the present application, that the alleged gap present in each of the references has the ability to perform the dampening function. Also, while the Examiner is correct that the references need not explicitly state that damping occurs by the alleged gaps, the *In re Robertson* case cited above does require extrinsic evidence of record that the alleged gaps can perform the dampening function. The Examiner has failed (despite the repeated protests of the Applicants) to provide proof (*e.g.*, references of record) to support the conclusion that the gaps purportedly disclosed in the cited references can perform the dampening function claimed by the Applicants. If the Examiner is relying upon personal knowledge, no affidavit has been provided. *See* M.P.E.P § 2144.03 (setting forth the requirements of reliance of common knowledge in the art).

Accordingly, the cited references do not disclose all of the elements of Independent Claim 6. Applicants respectfully request reconsideration, withdrawal of the rejections under 35 U.S.C. § 102 and full allowance of Claims 6 and Claims 8-10 that depend therefrom.

Responsiveness of Applicants' January 2, 2007 Response

In the April 3, 2007 Office Action, the Examiner alleges that Applicants' January 2, 2007 Response is considered not fully responsive. (April 3, 2007 Office Action, Page 3). Applicants traverse this allegation, and are confounded by the allegation. In the January 2, 2007 Response, Applicants fully responded to each statutory rejection raised by the Examiner, insofar as the Examiner's rejections were sufficient under applicable laws and regulations. To somehow assert that the Applicants are deficient in their Response because the Examiner failed to adequately explain his reasons for rejections under 35 U.S.C. § 102(b) defies logic.

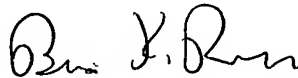
CONCLUSION

Applicants have made an earnest effort to place this case in condition for allowance in light of the remarks set forth above. Applicants respectfully request reconsideration of the claims as amended.

Applicants believe there are no fees due at this time, however, the Commissioner is hereby authorized to charge any fees necessary or credit any overpayment to Deposit Account No. 50-2148 of Baker Botts L.L.P.

If there are any matters concerning this Application that may be cleared up in a telephone conversation, please contact Applicants' attorney at 512.322.2684.

Respectfully submitted,
BAKER BOTTS L.L.P.
Attorney for Applicants



Brian K. Prewitt
Registration No. 60,135

Date: May 1, 2007

SEND CORRESPONDENCE TO:
BAKER BOTTS L.L.P.
CUSTOMER ACCOUNT NO. **31625**
512.322.2684
512.322.8383 (fax)